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(54) DUST CORE HAVING HIGH ELECTRICAL RESISTANCE AND
MANUFACTURING METHOD THEREFOR

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a dust core, which is made of soft magnetic metallic powder and in which strains are fully eliminated from the inside of the metallic powder through high-temperature annealing and the deterioration of permeability does not become an issue, even in a high frequency region due to significantly increased electrical resistance of the core.

SOLUTION: On the surface of the soft magnetic metallic powder, having average

Si content of at least 0.5 wt.% in its portion from the surface to a depth of 0.2 μm , an insulating coating film is formed by treating the surface of the powder with a phosphoric acid, boric acid, Na, K, Ca, Mg, Al, Si, Mn, or Zn phosphate or borate solution, or silicone resin. The dust core is obtained by molding the powder into the shape of the core by compression molding and performing stress relief annealing on the molded product.